

BELORUSSOV, Nikolay Ivanovich; KRASOTKIN, Valer'yan Nikolayevich;  
~~SARANOVA, A.L.~~, redaktor; LARIONOV, G.Ye, tekhnicheskiy redaktor.

[Power cables] Silovye kablei, Moskva, Gos.energ.isd-vo, 1955.  
464 p. (MLRA 8:10)  
(Electric cables)

BELOMUSOV, N.I., inzhener; SAAKYAN, A.Ye., inzhener.

Improving the technology of producing rubber-insulated conductors and  
cables. Vest.elektroprom.27 no.2:57-64 P '56. (MIRA 9:7)

1.Glavkabel' Ministerstva elektropromyshlennosti.  
(Electric cables) (Electric insulators and insulation)

BELORUSSOV, N. I.

383

AUTHOR: Babrussov, N. I., Engineer.

TITLE: Perspectives of technical development in the cable industry.  
(Perspektivy tekhnicheskogo razvitiya kabelnoy promyshlennosti)

PERIODICAL: "Vestnik Elektromyshlennosti" (Journal of the Electrical Industry), 1957, Vol. 28, No. 4, pp. 9 - 13 (U.S.S.R.)

ABSTRACT: By the end of the sixth Five Year Plan the output of cable will be 80% greater than in 1955. It will be necessary to develop and manufacture cables for 420 kV alternating current, direct current cables and bare conductors for the transmission of high powers.

Oil-filled cables for 110 kV are already being produced and have been used in Moscow for fifteen years. Medium pressure cables with reinforced sheaths have been made. High pressure cables consisting of three cables in a steel pipe filled with oil will be used in special cases. The production of 22 kV a.c. high pressure oil filled cables in steel pipes will commence in 1957. Oil-filled cables for 420 kV are being developed. These will use thin dense papers of high mechanical strength and the construction of a new factory for their manufacture must be speeded up. Gas-filled cables have been manufactured for voltages of 10 and 35 kV for use in vertical or steeply sloping installations. However, their use must be extended because normal impregnated cables are often installed on slopes. A non-draining impregnating compound has been developed. Attention is being paid to the protection of cable

Perspectives of technical development in the cable industry.<sup>383</sup>  
(Cont.)

sheathing and armouring against corrosion. Wires insulated with polyvinyl chloride offer a number of advantages.

To ensure safe operation in coal mines it is necessary to organise regular production of screened and non-burning mining cables. Special cables are also required for prospecting, drilling and other work in the oil industry. Further tasks include the organisation of the production of wires of improved thermal resistance. In cables for radio frequency the main tasks are to increase the stability of the electrical characteristics for cm. wavelengths, to improve the thermal stability, to develop cables for higher powers, flexible cables and delay cables.

Co-axial combined communications cables for the transmission of television programmes and multi-channel communication (up to 960 circuits) are in regular production. Styro flex insulated symmetrical cables are available for transmission of a frequency range of 260 kc/s. Urban communication cables have up to 1 200 pairs. The main task in communications cables is to increase the production of co-axial combined cables and symmetrical cables with styro-flex and paper insulation. The production of manganin, copper and other wires 5 - 8 microns in diameter with solid glass insulation for instrument manufacture has been organised and production must

(Cont.)

be extended.

The use of aluminium and plastic sheathings must be extended, the consumption of cotton and silk must be reduced by using plastic insulated wires and further work should be done to find substitutes for deficit materials and to reduce waste in production.

The industry faces considerable tasks in the mechanisation of production. Half of the rolling mills have been mechanised and some are partly automatic, and this practice must be extended. The introduction of continuous vulcanisation increases the productivity of labour by a factor of two to three and economises cloth and lead, but not all of the equipment is being well used. The design of presses for the application of plastics is very backward. In recent years, improved enamelling furnaces have been developed and their use must be extended. Furnaces are required for enamelling rectangular strip. Winding machines must be improved for the application of glass insulation. The manufacture of cable making machinery is in hand but not all the necessary types of machine are in production. Some of the equipment in the cable industry is more than 25 years old and requires replacement. Research is required on the development of machines and technological equipment. For the mechanisation and automation of technological processes and for mechanised inspection and works laboratories should be provided with qualified staff. No figures, no literature references.

~~Belorussov, N.I.~~  
~~BELORUSSOV, N.I., inzh.~~

The cable industry in the past 40 years. Vest. elektroprom. 28 no.11:  
36-41 N '57. (MIRA 10:12)

1. Gosplan SSSR.

(Electric cables)

BELORUSOV, N.I.

3(3)

PHASE I BOOK EXPLOITATION

SOV/1399

Bachelis, David Semenovich, Nikolay Ivanovich Belorussov, and Aleksandr Yeffemovich Saakyan

Elektricheskiye kabeli, provoda i shnury; spravochnik (Electric Cables, Conductors and Cords; Reference Book) Moscow, Gosenergoizdat, 1958. 480 p. 21,000 copies printed.

Ed.(Title page): Belorussov, N.I.; Ed. (Inside book): Solov'yev, P.F.;  
Tech. Ed.: Voronin, K.P.

PURPOSE: This book is intended for engineers and technicians of design and installation organizations, scientific research institutes and laboratories, for councils of the national economy of economic administrative regions, and for plants and factories using cables, wires and cords. It is also intended for workers in the cable industry and for students.

COVERAGE: The authors describe the various types of cables, conductors and cords manufactured in the USSR. They give the outside diameters and weights of the most frequently used types, their electrical characteristics and methods of measuring them. Data on permissible loads and recommendations for selection of various operating conditions are also given. The book includes a brief

Card 1/13

## Electric Cables (Cont.)

SOV/1399

treatment of the theory and principles of design of power cables with impregnated paper insulation, r-f cables and communication cables. The appendixes provide specifications of different types of cables, conductors and cords and explain the procedure for calculating the consumption of materials in the manufacture of various cable products. Chapters 1, 5, 15, 16, 17, 18, 19, 20, 21, 23 and the appendixes were written by D.S. Bachelis. Chapters 2, 13, 14, 22, and 24 by N.I. Belorussov, and Chapters 3, 4, 6, 7, 8, 9, 10, 11, and 12 by A.Ye. Saakyan. The authors thank the following persons for their help: Doctor of Technical Sciences I.Ye. Yefimov, Candidate of Technical Sciences R.M. Lakernik, Engineer Ye.A. Froshchin and Engineer P.F. Solov'ev.

## TABLE OF CONTENTS:

Foreword	3
Ch. 1. Bare Conductors	9
1. Nomenclature	9
2. Aluminum and steel-aluminum conductors	10
3. Bronze and bronze-steel conductors	11
4. Copper conductors	12
5. Hollow conductors	13
Card 2/13	



8(3)

PHASE I BOOK EXPLOITATION

SOV/3158

Belorussov, N. I., and I. I. Grodnev

Radiochastotnyye kabeli (Radio-Frequency Cables) 2nd ed., rev. Moscow, Gosenergoizdat, 1959. 318 p. Errata slip inserted. 10,000 copies printed.

Ed.: I. I. Yefimov; Tech. Ed.: G. I. Matveyev.

**PURPOSE:** The book was approved by the Administration of Secondary Specialized Schools, Ministry of Higher Education, USSR, as a textbook for tekhnikum students specializing in the production of cables and conductors. The book is also intended for engineering and technical personnel of the cable industry, design bureaus, laboratories, enterprises and departments engaged in the utilization and operation of radio-frequency cables.

**COVERAGE:** The authors outline the theory of coaxial and symmetrical cables, present electrical calculations and describe the basic types of radio-frequency cables. Basic information on waveguides is given. Radio-frequency

Card 1/7

# Radio-Frequency Cables

SOV/3158

cable materials, production processes and methods of testing and measuring these cables are described. The authors thank the following persons for their help in writing this book: Doctor of Technical Sciences I. Ye. Yefimov, Engineers V. N. Krasotkin (deceased), T. M. Orlovich and S. S. Solomonik, and Candidates of Technical Sciences K. Ya. Sergeychuk and V. I. Sushkovich. There are 39 Soviet references (including 11 translations).

## TABLE OF CONTENTS:

Foreword	3
Introduction	7
Ch. I. Principles of Transmission of Electromagnetic Energy by Cables	10
1. Initial equations of the cable network	10
2. Velocity of energy propagation along cables	19
3. Resonance properties of the cable network	21
4. Special features of the quarter-wave network	24

Card 2/7

## Radio-Frequency Cables

80V/1106

### Ch. II. Coaxial Cables

- |  |     |
|--|-----|
| 1. Electromagnetic processes in coaxial cables                                 | 25  |
| 2. Calculation of resistance   | 25  |
| 3. Calculation of parameters L, C and G  | 35  |
| 4. Calculation of secondary parameters of a coaxial cable                      | 47  |
| 5. Optimum relationship between diameters of the conductors of a coaxial cable | 51  |
| 6. Shielding properties of a coaxial cable                                     | 59  |
| 7. Calculation of power transmitted through a coaxial cable                    | 63  |
| 8. Frequency range for the use of coaxial cables                               | 66  |
| 9. Elements of construction of coaxial cables                                  | 70  |
| 10. Cables with a continuous polyethylene insulation                           | 82  |
| 11. Cables with heat-resistant insulation                                      | 95  |
| 12. Cables with rubber insulation  | 113 |
| 13. Coaxial cables with semi-air insulation                                    | 117 |
| 14. Coaxial cables with air insulation   | 119 |

### Ch. III. Spiral R-F Cables

- |  |     |
|--|-----|
| 1. Purpose and field of application of spiral cables | 128 |
| 2. Electric calculation of delay and matching cables | 128 |

Card 3/7

## Radio-Frequency Cables

SOV/3193

3. Various constructions of spiral cables and their basic characteristics	143
4. Transformation cables	146
Ch. IV. Symmetrical Cables	151
1. Electromagnetic processes in symmetrical cables	152
2. Calculation of a symmetrical unshielded cable	156
3. Calculation of a symmetrical shielded cable	160
4. Shielding properties of a symmetrical network	170
5. Constructional elements of symmetrical cables	180
6. Symmetrical unshielded cables	185
7. Symmetrical shielded cables	186
Ch. V. Waveguides	190
1. Physical processes in waveguides	190
2. Energy attenuation and velocity of transmission in waveguides	194
3. Comparison of waveguides and other types of transmission lines	198
4. Classification of waveguides and wave structure	200
5. Transverse-electric $H_{10}$ -mode wave in a rectangular waveguide	209

Card 4/7

## Radio-Frequency Cables

90V/3153

6. Special features of the H <sub>01</sub> -mode wave	210
7. Calculation of the electrical characteristics of waveguides	214
8. Construction of waveguides	216
9. Flexible waveguides	218
Ch. VI. Radio-Frequency Cable Connectors	220
1. General principles of constructing cable connectors	220
2. Construction of connectors	226
3. Connectors recommended by the International Electrotechnical Commission	228
4. Electrical characteristics of connectors	230
5. Physical and mechanical characteristics of connectors	232
Ch. VII. Materials for the Production of R-F Cables	233
1. Conductor materials	233
2. Polyethylene	234
3. Polystyrene	235
4. Polytetrafluoroethylene	236
5. Rubber	237
6. Polyvinyl chloride masticated rubber	238

Card 5/7

## Radio-Frequency Cables

SOV/3153

### Ch. VIII. Production of R-F Cables

1. Production of the inner conductor
2. Preparation of plastic material for insulation and sheathing
3. Apparatus for applying plastic insulation and sheathing
4. Applying polyethylene insulation
5. Applying insulation of polytetrafluoroethylene
6. Applying rubber insulation
7. Applying cap insulation
8. Applying the outer conductor
9. Braiders
10. Applying the sheathing
11. Example of planning the shop for the manufacture of R-F cables with polyethylene insulation

### Ch. IX. Testing and Measuring R-F Cables

1. Measuring lines
2. Setup for measuring attenuation
3. Q-meters
4. Measuring electrical characteristics of cables
5. Measuring wave impedance

Card 6/7

Radio-Frequency Cables

90V/5196

- |                                    |     |
|------------------------------------|-----|
| 6. Measuring attenuation           | 513 |
| 7. Testing with high voltage       | 517 |
| 8. Physical and mechanical testing | 511 |
| 9. Climatic testing                | 515 |

Bibliography 516

Alphabetical Index 518

Alphabetical Index of Makes of R-F Cable 520

AVAILABLE: Library of Congress (TK3351-B44, 1960)

CP-mal  
3-11-60

Card 7/7

BELORUSSOV, Nikolay Ivanovich; MEDOSEYEVA, Yelena Georgiyevna;  
SAPAROVA, A.L., red.; BORUNOV, N.I., tekhn.red.

[Cables, wires, and cords with plastic insulation] Kabeli,  
provoda i shnury s plastmassovoi izolyatsiei. Moskva, Gos.  
energ.izd-vo, 1960. 319 p. (MIRA 14:3)  
(Electric wire, Insulated) (Electric cables)



PHASE I BOOK EXPLOITATION

SOV/5565

Belorussov, Nikolay Ivanovich, and Yelena Georgiyevna Fedoseyeva

Kabeli, provoda i shnury s plastmassovoy izolyatsiyey (Plastic-Insulated Cables, Wires, and Cords) Moscow, Gosenergoizdat, 1960. 319 p. 13,000 copies printed.

Ed.: A. L. Saparova; Tech. Ed.: N. I. Borunov.

PURPOSE: This textbook is intended for students of cable engineering in technical schools of higher and specialized education. It may also be useful to engineers and technicians employed in cable plants and in scientific research or design institutions.

COVERAGE: The book presents a survey of the plastics used in the cable industry and examines their physicommechanical properties. Structural elements and the structural design of Soviet and non-Soviet cables, wires, and cords with plastic insulation are reviewed. The use of plastics for protective sheathing of various cables and wires, along with their maintenance, splicing, and sealing, are described. Production and organization problems of

Card 1/6

## Plastic-Insulated Cables (Cont.)

SOV/5565

manufacturing plastic-insulated cables and wires are discussed in detail. Chs. I, II, and IV (except sec. 1, 3, 4, 6, 7, 8, 10, 11, 13, and 15 of Ch. IV) and sec. 2 of Ch. V were written by N. I. Belorussov; Ch. III, sec. 7, 8, and 15 of Ch. IV, and Ch. V (except sec. 2) were written by Ye. G. Fedoseyeva. The remainder of the book was written jointly. The authors thank T. M. Orlovich and N. A. Basov for their help. There are 86 references: 47 Soviet (including 11 translations), 37 English, 1 German, and 1 French.

## TABLE OF CONTENTS:

Foreword	3
Ch. I. Plastic-Insulated Cables, Wires, and Cords	7
1. Classification of plastic-insulated-cable production	7
2. Polyethylene-insulated power cables	8
3. Power cables insulated with polyvinyl chloride plasticizer	23
4. Plastic-insulated wires	30
5. Plastic-insulated cords	33
Card 2/6	

S/110/60/000/011/008/012  
E194/E484

AUTHOR: Belorussov, N.I., Engineer

TITLE: Contribution to Discussion on the Article "Low-<sup>6</sup> Temperature Vulcanization of Tough Rubber Cable Sheaths"

PERIODICAL: Vestnik elektropromyshlennosti, 1960, No.11, pp.61-62

TEXT: Rubber insulated and sheathed cables are and will continue to be of great importance for industrial application. Rubbers that vulcanize at low temperature may be valuable for repair and jointing of cables but their use as cable sheathings gives rise to doubts. Rubbers with high contents of accelerators and activators may continue to vulcanize and lose their properties more rapidly in service than normal rubbers. It is not progressive to use rubber sheaths on polyethylene insulated cables, it would be more rational to develop new plastics of greater elasticity. Cables of sufficient flexibility may be obtained by the use of polyvinylchloride plastics of special formulation. The great advantage of modern plastics over rubber is the simplicity of their application to the cable, without vulcanization. It is not clear why the combination of rubber and polyethylene has been attempted, polyethylene itself is not flexible and does not need

Card 1/2

S/110/60/000/011/008/012  
E194/E484

Contribution to Discussion on the Article "Low Temperature  
Vulcanization of Tough Rubber Cable Sheaths"

a flexible rubber sheath. Various other plastic sheaths should  
be used for polyethylene cable. ✓

Card 2/2

MARKOSYAN, M.M., kand.tekhn.nauk, dotsent; BELORUSSOV, N.I., inzh.

"Cables and wires" by V.A. Privezentsev, A.V. Linkov. Review-  
ed by M.M. Markosian, N.I. Belorussov. Elektrichestvo no.7:  
94-96 J1 '61. (MIRA 14:9)

(Electric lines) (Electric cables)

(Privezentsev, V.A.)

(Linkov, A.V.)

KULAKOVA, Revekka Viktorovna; BELORUSSOV, N.I., retsentsent;  
FEDOSEYEVA, Ye.G., red.; LARIONOV, G.Ye., tekhn. red.

[Electric-power cables with plastic insulation] Silovye  
kabeli s plastmassovoi izoliatsiei. Moskva, Gosenergo-  
izdat, 1963. 94 p. (MIRA 16:7)

(Electric cables)

(Electric insulators and insulation)

BACHELIS, David Semenovich; BELORUSSOV, Nikolay Ivanovich; SAAKYAN, Aleksandr Yefremovich; ANTIK, I.V., red.; LARIONOV, G.Ye., tekhn. red.

[Manual on electric cables, wires, and cords] Elektricheskie kabeli, provoda i shnury; spravochnik. Pod red. N.I. Belorussova. Izd.2., perer. Moskva, Gosenergoizdat, 1963. 606 p. (MIRA 16:7)

(Electric wires--Handbooks, manuals, etc.)  
(Electric cables--Handbooks, manuals, etc.)

BELORUSSOV, V.O.

First results of using a small diameter scraper. Neftianik 2 no.1:17-18  
Ja '57. (MLPA 10:2)  
(Petroleum Pipelines)



BELOUSSOV, V.O., Cand Techn Sci--(PhD) "Study of the <sup>15</sup>P. *150g*  
the drilling of hard rocks in new directions. *At* in the regions  
of the USSR." Nov, 1951. 25 p. Min. of Heavy Industry. 1st. 1st  
Order of Labor Red Banner Inst of Technol. Chemical. 1st. 1st  
in Acad L.V. Gubkin. Chair of Drilling of Rocks and Minerals, 160 ac-  
tion (17,43-58, 101)

HELORUSSOV, V.O.

Variable spacial coordinates of bottom holes as a basis for  
sinking directional wells. Trudy MNI no.22:254-269 '58.

(Oil well drilling)

(MIRA 12:4)

BELORUSSOV, Vladimir Olegovich; SPIVAK, Aleksandr Ivanovich; SMIRNOV,  
V.I., vedushchiy red.; POLOSINA, A.S., tekhn.red.

[Handbook of a boring machine operator] Sputnik burovika.  
Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi  
lit-ry, 1960. 226 p. (MIRA 13:2)  
(Boring machinery) (Mining engineering)

KUVYKIN, Aleksandr Stepanovich; BELORUSSOV, Vladimir Olegovich; LEBEDEV,  
Yevgeniy Alekseyevich; KAMENEV, N.P., red.; ZAYNULLINA, G.Z., tekhn.  
red.

[Controlling circulation losses in Bashkir oil fields] Bor'ba s po-  
gloshcheniyami promyvochnoi zhidkosti na neftepromyslakh Bashkiri.  
Ufa, Bashkirskoe knizhnoe izd-vo, 1961. 97 p. (MIRA 14:6)  
(Bashkiria—Oil well drilling fluids)

TIMOFEYEV, N.S.; BELORUSSOV, V.O.

Possibility of drilling straight wells without load limit.  
Neft. khoz. 39 no.4:9-14 Ap '61. (MIRA 14:6)  
(Oil well drilling)

TIMOFEYEV, Nikolay Stepanovich; BELORUSSOV, Vladimir Olegovich;  
ISAYEVA, V.V., ved. red.; BASHMAKOV, G.M., tekhn. red.

[Drilling vertical wells under geological conditions  
facilitating well curvature] Burenie vertikal'nykh skvazhin  
v geologicheskikh usloviakh, sposobstvuiushchikh iskrivle-  
niiu skvazhin. Moskva, Gostoptekhizdat, 1962. 124 p.  
(MIRA 15:10)

(Oil well drilling)

BELORUSSOV, V.O.

Classification of absorption zones. Neft. khoz. 40 no.6:  
31-35 Je '62. (MIRA 15:6)  
(Oil well drilling fluids)

TIMOFEEV, N.S.; MARKOV, O.A.; BELORUSSOV, V.O.

Determining the index of the anisotropy of rocks taking into account  
the orientation of the well bore. Neft.khoz. 41 no.10-22-26  
O '63. (MIRA 17:4)



BELORUSSOV, V.O.

Test drilling of freezing wells with minimal curvature. Trudy  
VNIIBT no.10:105-111 '63. (MIRA 17:4)

KALININ, A.G.; BELORUSSOV, V.O.

Effect of the anisotropy of rocks on the crookedness of holes.  
Neft. khoz. 41 no.3:8-12 Mr '63. (MIRA 17:11)

BELORUSSOV, V.O., kand. tekhn. nauk

New developments in drilling technology and equipment. Bezop. truda  
v prom. 8 no.10:42-43 0 '64. (MIRA 17:11)

BELORUSSOV, V.O.

Method for controlling the spontaneous deviation of wells from the vertical. Trudy VNIIT no.14:92-97 '65. (MIRA 18:5)

KRASOZOV, I.P.; RUDCHENKO, V.P.; BASHKOV, A.I.; BELORUSSOV, Yu.G.

"Principles of technical progress in coal mining in the U.S.S.R."  
is a necessary and timely publication. Ugol' Ukr. 4 no.1:  
45-46 Ja '60. (MIRA 13:5)  
(Coal mines and mining)

BELORUTSKIY, A.G., mayor; GRIGOR'YEV, A.Ya., podpolkovnik; MILLEROV, V.I.,  
mayor; UL'YANOV, I.F., gvardii polkovnik zapasa; KHRENNikov, A.A.,  
podpolkovnik; TSABINOV, S.M., podpolkovnik; KONINSKIY, V.A., obshchiy  
red.; RAYEVSKIY, L.A., red.; UMANSKIY, P.A., tekhn.red.

[Tashkent Red Banner and Order of the Red Star Military Academy  
named for V.I.Lenin; a brief historical account] Tashkentskoye  
krasnoznamennoye i ordena Krasnoy Zvezdy voyennoye uchilishche  
imeni V.I.Lenina. Tashkent, Gos.izd-vo Uzbekskoi SSR, 1958.

280 p.

(MIRA 12:3)

(Tashkent--Military education)

BELODYNNINA, L. I.

Belodinnina, L. I. -- "Interceptive Effects of the Gastrointestinal Tract on the Bile-Excreting Function of the Liver." Acad Med Sci USSR. Inst of Normal and Pathological Physiology. Moscow, 1956. (Dissertation for the Degree of Candidate in Medical Science)

Co: Enizhnaya Letopis', No 11, 1956

ILLEGIBLE



17(1)  
 AUTHORS: Bulygin, I. A., Belorybkina, L. I. SOV/20-123-1-53/56

TITLE: The Receptory Function of the Lower Mesenteric Sympathetic Ganglion (Retseptornaya funktsiya nizhnego bryzhechnogo simpaticeskogo gangliya)

PERIODICAL: Doklady Akademii nauk SSSR, 1953, Vol 123, Nr 1, pp 196 - 199 (USSR)

ABSTRACT: Apart from the fact that the receptory functions of interior organs were often studied in the past decades, the authors could not find any studies on the subject mentioned in the title in the literature at their disposal. The sympathetic ganglia, however, play an important part in the regulation of the functions of the organism, and their receptory devices have long been known (Refs 1 - 3). In the introduction the authors embarked upon the subject under discussion. Surgical experiments were performed in dogs, in which under a morphine chloroform ether narcosis the ganglion was perfused with a Ringer-Locke solution, saturated with oxygen, according to the method of reference 4. Arterial ramifications of the arteria mesenterica inferior, which supplies the lower mesenteric ganglion with blood, were used for this purpose.

Card 1/3

The Receptory Function of the Lower Mesenteric  
Sympathetic Ganglion

SOV/20-123-1-53/56

For the stimulation of the receptors in the ganglion solutions of potassium chloride (0.5-3%), acetylcholine  $10^{-10}$  -  $10^{-2}$  and nicotine  $10^{-6}$  -  $10^{-3}$  were used. All these chemical stimulants, when they were introduced into the perfusion, caused distinct changes of blood pressure and respiration as well as head movements of the animal. The frequency of the reactions, the degree of distinctness and their character depend on the intensity and quality of the stimulants used as well as on the functional properties of the reacting organs and systems. The results obtained by the authors physiologically confirm the ideas of morphologists concerning the existence of receptors in the sympathetic ganglia. These results show that these receptors and the afferent fibers starting from them are capable of receiving humoralchemical and other shifts, which occur in the ganglia when stimulated; they are also capable of informing the central nervous system of these shifts. Apparently such an information is important for the reflectory regulation of the functions and not only for the sympathetic ganglia themselves, but also for other organs, especially those of blood circulation and respiration.

Card 2/3

The Receptory Function of the Lower Mesenteric  
Sympathetic Ganglion

SOV/20-123-1-53/56;

as it was proved in the tests of the authors. The conclusion can be drawn that the sympathetic ganglia are functionally connected with the central nervous system, not only centrifugally, but also centripetally. This provides numerous possibilities of central regulation of the functions of sympathetic ganglia which thus dispose of a relative autonomy only. At the same time the study of the interrelationship between the central and the peripheral reactions caused by the stimulation of sympathetic ganglia becomes necessary. There are 2 figures, 1 table, and 5 references, 4 of which are Soviet.

ASSOCIATION: Minskiy meditsinskiy institut (Minsk Medical Institute)  
PRESENTED: June 27, 1958, by K. M. Bykov, Academician  
SUBMITTED: June 20, 1958

Card 3/3

**BELORYBKINA, L.I.**

Effect of mechanical stimulation of the stomach on hepatic biligenesis.  
Vop. med. khim. 5 no.1:27-31 Ja-F '59. (MIRA 12:3)

1. Laboratory for Physiology and Pathology of Digestion, Institute  
of Normal and Pathologic Physiology, The USSR Academy of Medical  
Sciences, Moscow.

(STOMACH, physiol.

eff. of stimulation on biligenesis (Rus))

(BILE,

biligenesis, eff. of stomach stimulation (Rus))

BULYGIN, I.A.; BELORYBKINA, L.I.

Receptory function of vegetative ganglia. *Fiziol.zhur.* 45 no.12:  
1413-1421 D '59. (MIRA 13:4)

1. From the Department of Physiology, Medical Institute, Minsk.  
(GANGLIA AUTONOMIC pharmacol.)

BULYGIN, I.A.; BELOMYBKINA, L.I.; KUL'VANOVSKIY, M.P.

True sympathetic reflexes. Fiziol.zhur. 47 no.3:285-292 Mr '61.  
(MIRA 14:5)

1. From the Institute of Physiology of the B.S.S.R. Academy of  
Sciences and Medical Institute, Minsk.  
(NERVOUS SYSTEM, SYMPATHETIC) (REFLEXES)

YUGOSLAVIA/General Problems of Pathology - Tumors. Comparative  
Oncology. Tumors of Man

U

Abs Jour : Ref Zhur Biol., No 6, 1959, 27481

Author : Bukurov, S., Belosavich, S.

Inst : "

Title : Lipoma of the Stomach

Orig Pub : Med. pregled, 1957, 10, No 6, 357-361

Abstract : No abstract.

Card 1/1

BELOSEL'SKAYA, G.A.

Division of Muryun-Kum into physical geographical regions. Vop.geog.  
168-178 '56. (MLRA 9:11)

(Muryun-Kum--Physical geography)



BELOSEL'SKAYA, Galina Aleksandrovna; LAVRENT'YEVA, Ye.V., red.; NOGINA, N.I.,  
tekhn.red.

[The Andes] Andv. Moskva, Gos. izd-vo geogr. lit-ry, 1958. 47 p.  
(Andes) (MIRA 11:5)

BELOSEL'SKAYA, G.A.; REMIZOV, I.N.

Occurrence of marine sediments in the Poltava stage at Kuntsevo,  
Poltava Province, Ukrainian S.S.R. Izv. vys. ucheb. zav.;  
geol. i razv. 3 no.6:127-131 Je '60. (MIRA 14:7)

1. Khar'kovskiy gosudarstvennyy universitet.  
(Kuntsevo (Poltava Province)—Sediments (Geology))

BELOSEL'SKAYA, G.A. (Voronezh)

"Indina; geographical impressions" by N.A. Gvozdetskii. Reviewed  
by G.A. Belosel'skaia. Priroda 50 no. 3:104 '61. (MIRA 14:2)  
(India—Geography)

BELOSEL'SKAYA, G.A. (Voronezh)

"Reader on physical geography; non-Soviet Asia" by N.A. Gvozdet'skii,  
IU.K. Efremov, I.V. Kozlov. Reviewed by G.A. Belosel'skaia. Geog.  
v shkole 24 no.5:86-87 S-0 '61. (MIRA 14:8)  
(Asia--Geography)  
(Gvozdet'skii, N.A.) (Efremov, IU.K.) (Kozlov, I.V.)

BELOSEL'SKAYA, G.A.

Classification of areas using the example of several water divides  
of Poltava Province, White Russian S.S.R. Nauch. zap. Vor. otd. Geog.  
ob-vazh 11-16 '63.

Formation of residual watershed hills in the Central Russian Upland.  
Nauch. zap. Vor. otd. Geog. ob-vazh 24-28 '63. (MIRA 17:9)

KIL'DISHOVA, A.Ye.; BELOSELSKAYA, V.S.

Microbiological characteristics of bacteria causing bacillary  
dysentery in 1949-1950. Zhur. mikrobiol. epid. i immun. no. 10:  
99 0 '54. (MIRA 8-1)

1. Iz Kyubyshevskogo instituta epidemiologii i mikrobiologii.  
(SHIGELLA DYSENTERIAE)

BELOSL'SKAYA, Z.G.

21883 BELOSL'SKAYA, Z. G.

DDT v bor'be s vreditelyami  
ovoshchnykh i plodovo-yagodnykh Kul'tur.  
Trudy Pushkinsk.s.-Kh. m-ta, t. XIX, 1949,  
s. 147-63

SO: Letopis' zhurnal'nykh Statey, No. 29, Moskva, 1949.

1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 26

The subject of this monograph is the *Algebra of*

FD-302 (Rev. 4-15-64) (Instructions to Agent on FD-302, I.I.C., p. 2)  
 100-3 (197).--BPP Report on "The Search for the Truth About  
 A Conspiracy," J.S. 1978.



BELOSEL'SKAYA, Z.G.

Cherry sucker moth (*Argyresthia ephippella* F.) as an enemy of  
cherry and plum. Ent.oboz. 32:86-92 '52. (MLRA 7:1)

1. Leningradskiy sel'skokhozyaystvennyy institut.  
(Plum--Diseases and pests) (Cherry--Diseases and pests)  
(Moths)

BELOSEL'SKAYA, Z. G.

Vrediteli i bolezni tsvetochnykh i oranzhereinykh rastenii [Diseases and pests of  
flowering and hothouse plants], Moskva, Sel'khozgiz, 1953, 208 p.

SO: Monthly List of Russian Accessions, Vol. 6, No. 5, August 1953

ILLEGIBLE

ILLEGIBLE

*BELOSCEL'SKAYA, Z.G.*

USSR/General and Special Zoology. Insects. Injurious In- P  
sects and Ticks. Pests of Fruit and Berry Crops

Abs Jour : Ref Zhur - Biol., No 11, 1953, No 49615

Author : Belosel'skaya Z.G.

Inst : Leningrad Agricultural Institute

Title : The Formation of Harmful Fauna of Fruit Plantings  
in the Leningrad Oblast.

Orig Pub : Zap. Leningr. s.-kh. in-ta, 1956, vyp. 11, 155-  
162

Abstract : As a result of studies of a number of farms in  
the Leningrad Oblast, during 1953-1955, the  
species composition of the pests of the apple  
pear, plum and cherry trees and the red and  
black-fruit mountain ash are given, the degree and  
the conditions of their damage to various crops  
and varieties, the ways of distribution of the  
pests, and etc. are reported. It was noted that  
the rose-colored plants had a number of the

Card : 1/2

USSR/General and Special Zoology. Insects. Injurious Insects and Pests of Fruit and Berry Crops

Abs Jour : Ref Zhur - Biol., No 11, 1953, No 40513

same pests. Some pests (for example, the apple aphid and the winter measuring worm moth (*Spinothra bruceata* L.) are brought with the planting material into the plantings from the nurseries. Forest and brushwood stations are the refuge in winter and the place for feeding and breeding of ovipositing species, fruit and mountain ash moths, the little and elongated weevils. The apple weevil (*Ctenophthalmus aquaticus* L.) and the apple sucker (*Agilus* L. Fabric) come over from old gardens into new ones. Frost-resistant varieties of apple trees (Siberian Renets) are damaged by the apple aphid, winter measuring worm moth and the mountain ash moth (*Arctosthia conjugella* Zell.). Peculiar harmful fauna is formed on the black-fruit mountain ash. -- A.P. Adriaev

Card : 2/2

BELOSEL'SKAYA, Zoya Grigor'yevna, dotsent; SIL'VESTROV, Aleksandr  
Dmitriyevich, dotsent; VORONTSOV, A.I., red.; NERONOVA, M.D.,  
red.izd-va; SALAZKOV, N.P., tekhn.red.

[Protecting plantings from insects and diseases] Zashchita  
zelenykh nasazhdenii ot vreditel'ei i boleznei. Moskva, Izd-vo  
M-va kommun.khoz.RSFSR, 1959. 230 p. (MIRA 13:6)  
(Insecticides)

VESELOVSKIY, I.A.; BELOSEL'SKAYA, Z.G.; MARKELOVA, V.P.; LEBEDEV, V.A.,  
red.; TIKHONOVA, I.M., tekhn. red.

[Calendar for the collective and state farm fruit and vegetable  
grower] Kalendar kolkhoznogo i sovkhoznogo sadovoda i ovozhchevoda.  
Leningrad, Lenizdat, 1962. 31 p. (MIRA 15:5)  
(Fruit culture) (Vegetable gardening)



BELOSEL'SKAYA, Z.G., kand.sel'skokhoz.nauk

Apple fruit moth *Argyresthia conjugella* Zell. in Leningrad Province,  
Zashch. rast. ot vred. i bol. 8 no.2:51 F '63. (MIRA 15:7)

1. Leningradskiy sel'skokhozyaystvennyy institut.  
(Leningrad Province--Apple--Diseases and pests)  
(Leningrad Province--Moths--Extermination)

BELOPEISKAYA, Z.G.

Rowan with greyish-brown wings. (a) (b) (c) (d) (e) (f) (g) (h) (i) (j) (k) (l) (m) (n) (o) (p) (q) (r) (s) (t) (u) (v) (w) (x) (y) (z) (aa) (ab) (ac) (ad) (ae) (af) (ag) (ah) (ai) (aj) (ak) (al) (am) (an) (ao) (ap) (aq) (ar) (as) (at) (au) (av) (aw) (ax) (ay) (az) (ba) (bb) (bc) (bd) (be) (bf) (bg) (bh) (bi) (bj) (bk) (bl) (bm) (bn) (bo) (bp) (bq) (br) (bs) (bt) (bu) (bv) (bw) (bx) (by) (bz) (ca) (cb) (cc) (cd) (ce) (cf) (cg) (ch) (ci) (cj) (ck) (cl) (cm) (cn) (co) (cp) (cq) (cr) (cs) (ct) (cu) (cv) (cw) (cx) (cy) (cz) (da) (db) (dc) (dd) (de) (df) (dg) (dh) (di) (dj) (dk) (dl) (dm) (dn) (do) (dp) (dq) (dr) (ds) (dt) (du) (dv) (dw) (dx) (dy) (dz) (ea) (eb) (ec) (ed) (ee) (ef) (eg) (eh) (ei) (ej) (ek) (el) (em) (en) (eo) (ep) (eq) (er) (es) (et) (eu) (ev) (ew) (ex) (ey) (ez) (fa) (fb) (fc) (fd) (fe) (ff) (fg) (fh) (fi) (fj) (fk) (fl) (fm) (fn) (fo) (fp) (fq) (fr) (fs) (ft) (fu) (fv) (fw) (fx) (fy) (fz) (ga) (gb) (gc) (gd) (ge) (gf) (gg) (gh) (gi) (gj) (gk) (gl) (gm) (gn) (go) (gp) (gq) (gr) (gs) (gt) (gu) (gv) (gw) (gx) (gy) (gz) (ha) (hb) (hc) (hd) (he) (hf) (hg) (hh) (hi) (hj) (hk) (hl) (hm) (hn) (ho) (hp) (hq) (hr) (hs) (ht) (hu) (hv) (hw) (hx) (hy) (hz) (ia) (ib) (ic) (id) (ie) (if) (ig) (ih) (ii) (ij) (ik) (il) (im) (in) (io) (ip) (iq) (ir) (is) (it) (iu) (iv) (iw) (ix) (iy) (iz) (ja) (jb) (jc) (jd) (je) (jf) (jg) (jh) (ji) (jj) (jk) (jl) (jm) (jn) (jo) (jp) (jq) (jr) (js) (jt) (ju) (jv) (jw) (jx) (jy) (jz) (ka) (kb) (kc) (kd) (ke) (kf) (kg) (kh) (ki) (kj) (kk) (kl) (km) (kn) (ko) (kp) (kq) (kr) (ks) (kt) (ku) (kv) (kw) (kx) (ky) (kz) (la) (lb) (lc) (ld) (le) (lf) (lg) (lh) (li) (lj) (lk) (ll) (lm) (ln) (lo) (lp) (lq) (lr) (ls) (lt) (lu) (lv) (lw) (lx) (ly) (lz) (ma) (mb) (mc) (md) (me) (mf) (mg) (mh) (mi) (mj) (mk) (ml) (mm) (mn) (mo) (mp) (mq) (mr) (ms) (mt) (mu) (mv) (mw) (mx) (my) (mz) (na) (nb) (nc) (nd) (ne) (nf) (ng) (nh) (ni) (nj) (nk) (nl) (nm) (nn) (no) (np) (nq) (nr) (ns) (nt) (nu) (nv) (nw) (nx) (ny) (nz) (oa) (ob) (oc) (od) (oe) (of) (og) (oh) (oi) (oj) (ok) (ol) (om) (on) (oo) (op) (oq) (or) (os) (ot) (ou) (ov) (ow) (ox) (oy) (oz) (pa) (pb) (pc) (pd) (pe) (pf) (pg) (ph) (pi) (pj) (pk) (pl) (pm) (pn) (po) (pp) (pq) (pr) (ps) (pt) (pu) (pv) (pw) (px) (py) (pz) (qa) (qb) (qc) (qd) (qe) (qf) (qg) (qh) (qi) (qj) (qk) (ql) (qm) (qn) (qo) (qp) (qq) (qr) (qs) (qt) (qu) (qv) (qw) (qx) (qy) (qz) (ra) (rb) (rc) (rd) (re) (rf) (rg) (rh) (ri) (rj) (rk) (rl) (rm) (rn) (ro) (rp) (rq) (rr) (rs) (rt) (ru) (rv) (rw) (rx) (ry) (rz) (sa) (sb) (sc) (sd) (se) (sf) (sg) (sh) (si) (sj) (sk) (sl) (sm) (sn) (so) (sp) (sq) (sr) (ss) (st) (su) (sv) (sw) (sx) (sy) (sz) (ta) (tb) (tc) (td) (te) (tf) (tg) (th) (ti) (tj) (tk) (tl) (tm) (tn) (to) (tp) (tq) (tr) (ts) (tt) (tu) (tv) (tw) (tx) (ty) (tz) (ua) (ub) (uc) (ud) (ue) (uf) (ug) (uh) (ui) (uj) (uk) (ul) (um) (un) (uo) (up) (uq) (ur) (us) (ut) (uu) (uv) (uw) (ux) (uy) (uz) (va) (vb) (vc) (vd) (ve) (vf) (vg) (vh) (vi) (vj) (vk) (vl) (vm) (vn) (vo) (vp) (vq) (vr) (vs) (vt) (vu) (vv) (vw) (vx) (vy) (vz) (wa) (wb) (wc) (wd) (we) (wf) (wg) (wh) (wi) (wj) (wk) (wl) (wm) (wn) (wo) (wp) (wq) (wr) (ws) (wt) (wu) (wv) (ww) (wx) (wy) (wz) (xa) (xb) (xc) (xd) (xe) (xf) (xg) (xh) (xi) (xj) (xk) (xl) (xm) (xn) (xo) (xp) (xq) (xr) (xs) (xt) (xu) (xv) (xw) (xx) (xy) (xz) (ya) (yb) (yc) (yd) (ye) (yf) (yg) (yh) (yi) (yj) (yk) (yl) (ym) (yn) (yo) (yp) (yq) (yr) (ys) (yt) (yu) (yv) (yw) (yx) (yy) (yz) (za) (zb) (zc) (zd) (ze) (zf) (zg) (zh) (zi) (zj) (zk) (zl) (zm) (zn) (zo) (zp) (zq) (zr) (zs) (zt) (zu) (zv) (zw) (zx) (zy) (zz) (Aa) (Ab) (Ac) (Ad) (Ae) (Af) (Ag) (Ah) (Ai) (Aj) (Ak) (Al) (Am) (An) (Ao) (Ap) (Aq) (Ar) (As) (At) (Au) (Av) (Aw) (Ax) (Ay) (Az) (Ba) (Bb) (Bc) (Bd) (Be) (Bf) (Bg) (Bh) (Bi) (Bj) (Bk) (Bl) (Bm) (Bn) (Bo) (Bp) (Bq) (Br) (Bs) (Bt) (Bu) (Bv) (Bw) (Bx) (By) (Bz) (Ca) (Cb) (Cc) (Cd) (Ce) (Cf) (Cg) (Ch) (Ci) (Cj) (Ck) (Cl) (Cm) (Cn) (Co) (Cp) (Cq) (Cr) (Cs) (Ct) (Cu) (Cv) (Cw) (Cx) (Cy) (Cz) (Da) (Db) (Dc) (Dd) (De) (Df) (Dg) (Dh) (Di) (Dj) (Dk) (Dl) (Dm) (Dn) (Do) (Dp) (Dq) (Dr) (Ds) (Dt) (Du) (Dv) (Dw) (Dx) (Dy) (Dz) (Ea) (Eb) (Ec) (Ed) (Ee) (Ef) (Eg) (Eh) (Ei) (Ej) (Ek) (El) (Em) (En) (Eo) (Ep) (Eq) (Er) (Es) (Et) (Eu) (Ev) (Ew) (Ex) (Ey) (Ez) (Fa) (Fb) (Fc) (Fd) (Fe) (Ff) (Fg) (Fh) (Fi) (Fj) (Fk) (Fl) (Fm) (Fn) (Fo) (Fp) (Fq) (Fr) (Fs) (Ft) (Fu) (Fv) (Fw) (Fx) (Fy) (Fz) (Ga) (Gb) (Gc) (Gd) (Ge) (Gf) (Gg) (Gh) (Gi) (Gj) (Gk) (Gl) (Gm) (Gn) (Go) (Gp) (Gq) (Gr) (Gs) (Gt) (Gu) (Gv) (Gw) (Gx) (Gy) (Gz) (Ha) (Hb) (Hc) (Hd) (He) (Hf) (Hg) (Hh) (Hi) (Hj) (Hk) (Hl) (Hm) (Hn) (Ho) (Hp) (Hq) (Hr) (Hs) (Ht) (Hu) (Hv) (Hw) (Hx) (Hy) (Hz) (Ia) (Ib) (Ic) (Id) (Ie) (If) (Ig) (Ih) (Ii) (Ij) (Ik) (Il) (Im) (In) (Io) (Ip) (Iq) (Ir) (Is) (It) (Iu) (Iv) (Iw) (Ix) (Iy) (Iz) (Ja) (Jb) (Jc) (Jd) (Je) (Jf) (Jg) (Jh) (Ji) (Jj) (Jk) (Jl) (Jm) (Jn) (Jo) (Jp) (Jq) (Jr) (Js) (Jt) (Ju) (Jv) (Jw) (Jx) (Jy) (Jz) (Ka) (Kb) (Kc) (Kd) (Ke) (Kf) (Kg) (Kh) (Ki) (Kj) (Kk) (Kl) (Km) (Kn) (Ko) (Kp) (Kq) (Kr) (Ks) (Kt) (Ku) (Kv) (Kw) (Kx) (Ky) (Kz) (La) (Lb) (Lc) (Ld) (Le) (Lf) (Lg) (Lh) (Li) (Lj) (Lk) (Ll) (Lm) (Ln) (Lo) (Lp) (Lq) (Lr) (Ls) (Lt) (Lu) (Lv) (Lw) (Lx) (Ly) (Lz) (Ma) (Mb) (Mc) (Md) (Me) (Mf) (Mg) (Mh) (Mi) (Mj) (Mk) (Ml) (Mm) (Mn) (Mo) (Mp) (Mq) (Mr) (Ms) (Mt) (Mu) (Mv) (Mw) (Mx) (My) (Mz) (Na) (Nb) (Nc) (Nd) (Ne) (Nf) (Ng) (Nh) (Ni) (Nj) (Nk) (Nl) (Nm) (Nn) (No) (Np) (Nq) (Nr) (Ns) (Nt) (Nu) (Nv) (Nw) (Nx) (Ny) (Nz) (Oa) (Ob) (Oc) (Od) (Oe) (Of) (Og) (Oh) (Oi) (Oj) (Ok) (Ol) (Om) (On) (Oo) (Op) (Oq) (Or) (Os) (Ot) (Ou) (Ov) (Ow) (Ox) (Oy) (Oz) (Pa) (Pb) (Pc) (Pd) (Pe) (Pf) (Pg) (Ph) (Pi) (Pj) (Pk) (Pl) (Pm) (Pn) (Po) (Pp) (Pq) (Pr) (Ps) (Pt) (Pu) (Pv) (Pw) (Px) (Py) (Pz) (Qa) (Qb) (Qc) (Qd) (Qe) (Qf) (Qg) (Qh) (Qi) (Qj) (Qk) (Ql) (Qm) (Qn) (Qo) (Qp) (Qq) (Qr) (Qs) (Qt) (Qu) (Qv) (Qw) (Qx) (Qy) (Qz) (Ra) (Rb) (Rc) (Rd) (Re) (Rf) (Rg) (Rh) (Ri) (Rj) (Rk) (Rl) (Rm) (Rn) (Ro) (Rp) (Rq) (Rr) (Rs) (Rt) (Ru) (Rv) (Rw) (Rx) (Ry) (Rz) (Sa) (Sb) (Sc) (Sd) (Se) (Sf) (Sg) (Sh) (Si) (Sj) (Sk) (Sl) (Sm) (Sn) (So) (Sp) (Sq) (Sr) (Ss) (St) (Su) (Sv) (Sw) (Sx) (Sy) (Sz) (Ta) (Tb) (Tc) (Td) (Te) (Tf) (Tg) (Th) (Ti) (Tj) (Tk) (Tl) (Tm) (Tn) (To) (Tp) (Tq) (Tr) (Ts) (Tt) (Tu) (Tv) (Tw) (Tx) (Ty) (Tz) (Ua) (Ub) (Uc) (Ud) (Ue) (Uf) (Ug) (Uh) (Ui) (Uj) (Uk) (Ul) (Um) (Un) (Uo) (Up) (Uq) (Ur) (Us) (Ut) (Uu) (Uv) (Uw) (Ux) (Uy) (Uz) (Va) (

3. Katedra psikiatrii zygustwa i encefalologii, Instytut psychiatrii  
psikiatrii zygustwa i encefalologii, Instytut psychiatrii

BELOSEL'SKIY, B. S.

BELOSEL'SKIY, B. S. --"Study of Certain Laws of Behavior of Sulfur Compounds in Solid Power Fuel When it is Fully Utilized for Power Technology." \*(Dissertations for Degrees in Science and Engineering Defended at USSR Higher Educational Institutions) Min of Higher Education USSR, Moscow Order of Lenin Tower Institute V. M. Molotov, Moscow, 1955

SO: Knizhnaya Letopis', No. 25, 18 Jun 55

\* For Degree of Candidate in Technical Sciences

AKOL'ZIN, Pavel Alekseyevich; SHAPKIN, Il'ya Fedorovich; BELOSEL'SKIY, B.S.,  
redaktor; MINASYAN, Ye.A., redaktor izdatel'stva; KONYASHINA, A.,  
tekhnicheskiiy redaktor

[Water preparation in communal steam power installations] Vodopodgo-  
tovka v kommunal'nykh parosilovykh ustanovkakh. Moskva, Izd-vo  
Ministerstva kommunal'nogo khoziaistva RSFSR, 1956. 135 p.  
(Feed-water purification) (MIRA 10:2)

*Belosel'skiy, B. S.*

AID P - 5114

Subject : USSR/Engineering

Card 1/1 Pub. 110-a - 17/18

Authors : ~~Belosel'skiy, B. S.~~, B. M. Troyanovskiy, Kandidats  
Tech. Sci., A. M. Mostovaya, Librarian.

Title : New books

Periodical : Teploenergetika, 10, 63-64, 0 1956

Abstract : Book-reviews discussing 14 new technical books published  
in the USSR in 1956.

Institution : None

Submitted : No date

DEL 0511 0411 001

PHASE I BOOK EXPLOITATION

386

Akol'zin, Pavel Alekseyevich

Korroziya metalla parovykh kotlov (Corrosion of Metal in Steam Boilers) Moscow, Gosenergoizdat, 1957. 223 p. 6,900 copies printed.

Ed.: Belosel'skiy B.S.; Tech. Ed.: Medvedev, L. Ya.

PURPOSE: This book is intended for operational personnel, engineers and technicians, for workers of research, design, and planning organizations, and for students at power-engineering and chemical institutes.

COVERAGE: The book deals with the basic types of steam boiler corrosion and means of preventing it. Attention is focused chiefly on corrosion by oxygen, intercrystalline corrosion, and corrosion developing under boiler sludge ("sub-sludge" corrosion). Corrosion of boilers used in the production of heat and power is given special consideration. The monograph incorporates the results of the more recent investigations conducted by the Water Department of the Vsesoyuznyy Teploekhnicheskii Institut

Card 1/6

## Corrosion of Metal in Steam Boilers

386

(All-Union Heat and Power Institute) in the field of boiler corrosion. The author expresses his thanks to the following personalities affiliated with the institute: Glushenko, V.V., scientific worker; Mikhaylova, N.M., technician; Anan'yeva, N.I., technician; and to certain personalities employed at power plants who participated in experimental work; Zaytseva, Z.I.; Kolodeznyy, B.A.; Lazareva, K.I.; Akinshina, N.V.; Pushenko, M.A.; Subbotin, N.A.; Chernova, L.A.; Shevchenko, V.I.; Shugayu, G.A.; and Yushin, D.A. Other personalities whose assistance is acknowledged are: Mamet, A.P., Doctor of Technical Sciences, author of *Korroziya teplosilovogo oborudovaniya elektrostantsiy* (Corrosion of Heat and Power Equipment at Electric Power Plants, 1952); Tomashov, N.D., Doctor of Chemical Sciences; and Zhuk, N.P., Candidate of Chemical Sciences. There are 74 references, of which 55 are Soviet, 14 English, and 5 German.

Card 2/6

# Corrosion of Metal in Steam Boilers

386

## TABLE OF CONTENTS:

Preface	5
Ch. I. Essentials of the Theory of Electrochemical Corrosion	7
1. Basic thermodynamic and kinetic principles of corrosion processes	7
2. Behavior of cathodic areas	17
3. Behavior of anodic areas	21
4. Diagram of the corrosion process	25
5. Multi-electrode corrosion systems	28
Ch. II. Oxygen Corrosion of Steam Boilers	32
1. Experimental investigation of the conditions causing oxygen corrosion	32
2. Investigation of the role of oxygen in corrosion	36

Card 3/6



Corrosion of Metal in Steam Boilers	386
3. Effect of electrolyte composition	43
4. The importance of heat intensity in corrosion	53
5. Effect of the speed of water circulation	59
6. Effect of pressure and temperature	61
7. Prevention of corrosion by desorptive elimination of oxygen from water	63
8. Prevention of corrosion by chemical elimination of oxygen from the water	83
9. Prevention of corrosion by electrochemical elimination of oxygen from the water	94
Ch. III. Corrosion of Steam Boilers under the Action of Oxidizing Salts	98
1. Types of damage	98
2. Results of investigating the mechanism and factors of corrosion	102
3. Methods of preventing corrosion	111

Card 4/6

Corrosion of Metal in Steam Boilers	386	
Ch. IV. Intercrystalline Corrosion of Steam Boilers		112
1. The nature of intercrystalline corrosion of boiler metal		112
2. Intercrystalline corrosion of steam boilers as encountered in actual experience		119
3. Results of investigating the mechanism and factors of corrosion		127
4. Methods of preventing intercrystalline corrosion		146
Ch. V. Corrosion of Steam Boilers Developing Beneath the Sludge		170
1. Types of damage		170
2. Results of investigating the mechanism and factors of corrosion		175
3. Carbon dioxide corrosion and methods of preventing it		195
4. Corrosion during down time of equipment and methods of preventing it		207

Card 5/6

Corrosion of Metal in Steam Boilers 386

- 5. Additional measures for decreasing corrosion of the  
feed-water conduit 215
- 6. Alkali corrosion of boiler metal 218
- 7. Corrosion fatigue 220
- 8. Corrosion by steam and water 220

Bibliography 222

AVAILABLE: Library of Congress

Card 6/6

GO/lsb  
25 June 1958

BELOSEL'SKIY, B.S.

Kizel-coal sulfides and their behavior during thermal processing.  
Nauch.dokl.vys.shkoly; energ. no.3:133-138 '58. (MIRA 12:1)

1. Rekomendovano kafedroy tekhnologii vody i topliva Moskovskogo  
energeticheskogo instituta.  
(Coal) (Sulfides)

SHAPKIN, Il'ya Fedorovich; BELOSEL'SKIY, B.S., red.; VORONIN, K.P.,  
tekhn.red.

[Small-capacity plunger and piston pumps used in heat-power  
engineering] Plunshernye i porshnevye nasosy maloi proizvo-  
ditel'nosti v teploenergetike. Moskva, Gos.energ.izd-vo, 1960.  
94 p. (MIRA 14:1)

(Pumping machinery)  
(Power engineering--Equipment and supplies)

BELOSEL'SKIY, B.S.; BI TSZE-TSZIN [Pi Tsê-ching]; SOLYAKOV, V.K.

Heat capacity and desorptive ability of aluminosilicate  
catalysts [with summary in English]. Inzh.-fiz. zhur.  
4 no.9:104-107 S '61. (MIRA 14:8)

1. Energeticheskiy institut, g. Moskva.  
(Heat capacity) (Desorption) (Aluminosilicates)

PEKKER, Ya.L., kand. tekhn. nauk; BELOSEL'SKIY, B.M., kand. tekhn. nauk

Study of coal carry-off from furnaces and problem of the  
intensification of the combustion of pulverized coal. Elek.  
sta. 35 no.5:71-75 My '64. (MIRA 17:8)

1. Moskovskiy energeticheskiy institut.

IPPOLITOV, A.S., kand.tekhn.nauk; BELOSEL'SKIY, B.S., kand.tekhn.nauk;  
BYSTRITSKIY, G.F., inzh.

Study of the burning of solid fuels in intersecting streams.  
Teploenergetika 12 no.10:38-41 0 '65.

(MIRA 18:10)

1. Moskovskiy energeticheskiy institut.



GOLUBTSOV, V.A.; BELOSEL'SKIY, B.S.; BI TSZE-TSZIN [Pi Chieh-ching]

Using a liquid heat carrier in studying the process of the  
thermal decomposition of fuel. Ispol'. tverd. topl., ser.  
maz. i gaza no. 5:94-101 '64 (MIRA 19:2)

S/123/61/000/014/015/045  
A004/A101

AUTHORS: Zvonitskiy, A. Yu.; Belosel'skiy, N. V.

TITLE: The practice of developing and introducing the gang technology

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 14, 1961, 2, abstract 14B8. (V sb. "Gruppovaya tekhnol. v mashinostr. i priborostr." Moscow - Leningrad, Mashgiz, 1960, 323-339)

TEXT: The introduction of the gang method was started with automatic and turret-lathe operations. For these purposes small-size pneumatic units with a clamping stress of 500 kg were utilized which made it possible to fasten in one fixture 3-4 parts simultaneously. The authors describe: a four-position gang fixture for the milling of slots, grooves and flats, a 72-position gang setting of a lapping automatic, indexing draw-in attachment, semi-automatic gang milling fixture for the processing of horned nuts, for-spindle drilling head with adjustable inter-center distances, gang jigs with automatic fastening and ejection of parts, fixture for the mandrel-less winding of cylindrical springs increasing the productivity by a factor of 10-15. The authors present examples of gang

Card 1/2

The practice of developing and introducing the ...

S/123/61/000/014/015/045  
A004/A101

machining on centerless grinding and thread-rolling machines, as well as on cold-upsetting automatics. There are 16 figures.

I. Briskman

[Abstracter's note: Complete translation]

Card 2/2

BELDSELSKIY, V.										PROCESSES AND PROPERTIES INDEX										NO AND 6TH COVER									
CA																													
<p>SYNOPSIS.</p> <p>Photochemical decomposition of ammonia adsorbed on crystals of copper sulfate and magnesium oxide. V. Belomestnyy. <i>J. Phys. Chem.</i> (U. S. S. R.) 13, 580-82 (1959).—From the variation of reaction rate with wave length it is inferred that in addn. to <math>\text{NH}_3</math> mole. incorporated within the ionic lattice of <math>\text{CuSO}_4</math> there is a layer of mole. loosely held on the surface by van der Waals forces, and that on <math>\text{MgO}</math> there is both this latter type of adsorption and activated adsorption. In both kinds of adsorption the interat. H-bonds in the <math>\text{NH}_3</math> mol. are weakened, the more so the more powerful is the adsorption. The energies of disocn. of adsorbed <math>\text{NH}_3</math> were calcd. B. C. P. A.</p>																													
<p>ASB-31A METALLURGICAL LITERATURE CLASSIFICATION</p>																													
<p>1959000 1</p>										<p>1959000 1</p>										<p>1959000 1</p>									
<p>1959000 1</p>										<p>1959000 1</p>										<p>1959000 1</p>									

BELOSELSKIY, V. V.		POSITIONS AND PROPERTIES INDEX									
1978		9									
<p>ON THE RELATIONSHIP BETWEEN THE HALF-LIFE OF A K CAPTURE AND THE ENERGY OF THE <math>\gamma</math> RADIATION. V. Beloselskiy. Doklady Akad. Nauk S.S.S.R. 78, 783-5 (1980) Dec. 21. (In Russian)</p> <p>An attempt is made to find an empirical relationship be- tween the half-life periods of K captures and the only characteristic energy data known so far for these proc- esses, viz., the energy of the emitted <math>\gamma</math> radiation. If logarithms of half-lives are plotted against the energy of the quanta, all points appear to be distributed upon several almost parallel, down-sloping, straight lines. The follow- ing regularities become apparent: nuclei with even numbers Z of protons and odd numbers N of neutrons are present on all lines; those with odd Z are forbidden on</p> <p>some lines but allowed on others, depending on the parity of N; and those with even Z and N are forbidden on all lines</p>											
ASR-SLA METALLURGICAL LITERATURE CLASSIFICATION											
<table border="1"> <tr> <td>100000</td> <td>100000</td> <td>100000</td> <td>100000</td> </tr> <tr> <td>100000</td> <td>100000</td> <td>100000</td> <td>100000</td> </tr> </table>				100000	100000	100000	100000	100000	100000	100000	100000
100000	100000	100000	100000								
100000	100000	100000	100000								

24 6200

39139  
3/358/62/000/006/127/136  
A062/A101

AUTHOR: Belosel'skiy, V. S.

TITLE: Empirical formula for determining the maximum cross section of a multiple ionization

PERIODICAL: Referativnyy zhurnal, Fizika, no. 6, 1962, 54 - 55, abstract 6Zh357 ("Tr. Voronezhsk. un-ta", 1961, v. 55, 69 - 71)

TEXT: An empirical formula is given for evaluating the maximum cross section of a multiple ionization of different elements by electrons

$$\sigma_{zi} \approx \sigma_1 \cdot \exp \left( - \frac{6.78}{Z_0^{1/4}} \sqrt{Z_1 - 1} \right),$$

where  $\sigma_1$  is the maximum cross section of a single ionization,  $Z_0$  - the number of the element in the Mendeleyev table,  $Z_1$  - the order of the ionization. It is shown that the values  $\sigma_{zi}$  calculated by this formula for He ( $\sigma_2$ ), Ne ( $\sigma_2\sigma_3$ ), Ar ( $\sigma_2\sigma_3\sigma_4$ ), Hg ( $\sigma_2\sigma_3\sigma_4\sigma_5$ ) and Ni ( $\sigma_{28}$ ) coincide in the order of magnitude with the measured values.

[Abstracter's note: Complete translation]

I. Flaks

Card 1/1

44-1740

S/058/62/000/006/123/136  
A062/A101

AUTHOR Belosel'skiy, V. S.

TITLE Losses of power in the extraction of ion beams

PERIODICAL: Referativnyy zhurnal, Fizika, no. 6, (XII), 48, abstract 6Zh314  
("Tr. Voronezhsk. un-ta", 1961, v. 55, 73 - 78)

TEXT The power, used for the ion production in a source chamber, the extraction of the ion beam and the radiation losses, is evaluated. It is shown that the fundamental power losses are proportional to the tension in the  $5/2$  power, whereas the extracted current is proportional to that tension in the  $3/2$  power. Thus the maximum possible current of the ion source is proportional to the power losses in the  $3/5$  power:  $I = (W/K)^{3/5}$ . An equation is supplied for the coefficient  $K$ , referred to as "design parameter", connecting the atomic weight of the ion, the cathode-anode gap, the charge of the ion, the cross section of the electron beam, the ionization potential and the extracting tension. The analysis of the equation of the coefficient  $K$  shows the possibility of reducing the consumed power, in particular through the choice of an optimum rela-

✓C

Card 1/2

Losses of power in the extraction of ion beams

U/6/6/66/006/123/130  
A062/A101

tion between the extracting and ionizing tensions or by increasing the gradient  
of the extracting tension.

V. Ionov

[Abstractor's note: Complete translation]

Card 2/2



S/164/62/000/006/101/232  
D201/D308

AUTHOR: Belosel'skiy, V.S.

TITLE: An empirical formula for determining the maximum cross-section of multiple ionization

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 6, 1962, 54-55, abstract 6Zh357 (Tr. Voronezhsk. un-ta, 1961, 55, 69-71)

TEXT: An empirical formula for estimating max. cross-section of multiple ionization of various elements by electrons

$\sigma_{zi} = \sigma_1 \cdot \exp\left(-\frac{6.78}{Z_0^{1/4}} \sqrt{Z_1 - 1}\right)$ , where  $\sigma_1$  - the max. cross-section of

single ionization,  $Z_0$  - the number of the element in the periodical table,  $Z_1$  - multiplicity of ionization. It is shown that the values of  $\sigma_{zi}$  calculated from this formula for He( $\sigma_2$ ), Ne( $\sigma_2$ ,  $\sigma_3$ ), Ar( $\sigma_2$ ,  $\sigma_3$ ,  $\sigma_4$ ), Hg( $\sigma_2$ ,  $\sigma_3$ ,  $\sigma_4$ ,  $\sigma_5$ ) and Ni( $\sigma_{28}$ ) are of the same order of

Card 1/2

An empirical formula for ...

S/194/62/000/006/181/232  
D201/D308

magnitude as those obtained by measurement. [Abstracter's note:  
Complete translation.]

Card 2/2

S/194/62/000/006/175/232  
D201/D308

86-2312  
AUTHOR: Belosel'skiy, V.S.

TITLE: Power losses in ion beam extraction

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika,  
no. 6, 1962, 48, abstract 62h314 (Tr. Voronezhsk. un-  
ta, 1961, 55, 73-78)

TEXT: The power required for producing ions in the source chamber for beam extraction and radiation losses are estimated. It is shown that basic power losses are proportional to the  $5/2$  power of the accelerating voltage and that the extraction current is proportional to the  $3/2$  power of the same voltage. The maximum possible ion source current is thus proportional to the power losses raised to  $3/5$ :  $I = (W/K)^{3/5}$ . The expression for the factor K, the so-called 'structural parameter' is derived. It connects the ion atomic weight to the anode-cathode distance, ion charge, the cross-section of the electron beam, the ionizing potential and extraction voltage. The analysis of the expression for K shows the possibility of decreasing the power consumed, in particular by choosing the optimum ratio

Card 1/2

BELUSEROV, I.P.

- 3(5) PHASE I BOOK EXPLOITATION SOV/2621  
 Vsesoyuzny nauchno-issledovatel'skiy institut geofizicheskikh meto-  
 dov razvedki  
 Razvedchnaya i promyslovaya geofizika, vyp. 24 (Exploration and In-  
 dustrial Geophysics, No. 24), Moscow, Gosgostekhnizdat, 1958, 58 p.  
 (Series: Obmen proizvodstvennym opytom), 500 copies printed.  
 Ed.: M.K. Polshkov, Exec. Ed.: Ye. G. Permina; Tech. Ed.: I.G.  
 Fedotova.  
 PURPOSE: This booklet is intended for geophysicists as well as en-  
 gineers and technicians engaged in geophysical work.  
 COVERAGE: This collection of articles discusses new methods of in-  
 terpretation of geophysical data, improvements in the design and per-  
 formance of electrical logging, gravimetric and seismic data per-  
 forators, etc.). Improvements made in older instruments (e.g., a  
 charge in the design of a perfomance of a radiative electrical  
 logging) are also discussed. References accompany each article.  
 Popov, Yu. N. Interpretation of Telluric Current Observations 17  
 Popov, Yu. N. Nomogram for the Control of Angles in Constructing 22  
 Vector Diagrams in the Telluric Current Method  
 Bozdovsky, V.P. Computing Coefficients of Dipole Units in Cur- 24  
 vilinear Logging  
 Beloserev, I.P. Gravity Effect of a Vertical Cylinder of Finite 26  
 Dimensions  
 Molochnikov, Z.I. Evaluating the Character of Oil Saturation of 34  
 Carbonaceous Reservoir Rocks Through Electrologging Data  
 Appel'rod, S.M. Well Cementometer for Operation With a Single- 37  
 Strand Cable  
 Zeltman, F.A. Substituting the Inclinator IZh-3 and IZh-4 42  
 Rheochords Without Subsequent Rescaling  
 Gorbunov, I.A. New Perforators for Oil Wells 46  
 Kargov, O.M., and N.P. Sumarov. Automatic Moist Switch-off for 56  
 Large Cable Loads  
 Gorkiy, Ya.Ye. Change in the Design of a High Voltage Trans- 57  
 former in a Depth Appliance for Radiative Logging  
 AVAILABLE: Library of Congress  
 Card 3/3  
 MS/MS  
 12-31-58

BELOSEROVA, S.P.

Effect of plastic deformation, caused by high-frequency vibrations, on  
internal friction and Young's modulus in alkali metal halide crystals.  
Fiz. tver. tela 5 no. 7:2025-2027 J1 '62. (Russian)  
(Alkali metal halide crystals)  
(Deformations (Mechanics))

ILLEGIBLE

BELOSERSKIY, A. N. (Moscow, USSR,)

"Polyphosphates, Their Formation and Significance for the Development of Certain Lower Organisms. "

report submitted IV Intl. Cong. of Biochemistry, Vienna, 1 - 6 Sep 1958.

BELOSEVIC, Mirko

Reconstruction of leadoff heads in spinning mills. Tekstil  
Zagreb 13 no.3:226-231 Mr '64

1. Manager, Cotton Spinning Mill, Glina.



ILLEGIBLE

*Belosevich, V.K.*

AUTHOR: Zhetvin, H.P., Candidate of Technical Sciences, and Belosevich, V.K., Engineer. 289

TITLE: Rolling and heat treatment of titanium. (Pr katka i termicheskaya obrabotka titana.)

PERIODICAL: "Tsvetnye Metally" (Non-ferrous Metals), 1957, No. 1, pp. 72 - 81. (U.S.S.R.)

ABSTRACT: In this article, the results are given of a practical investigation of the rolling of section and flat products from technical titanium and from titanium alloyed with aluminium. The heat treatment and metallographic investigation of these materials were also studied in the investigation.

No particular difficulties were encountered in rolling sections from the titanium-aluminium alloy; finishing operations are best carried out at 200-300 °C. The hot rolling of sheet from both technical titanium and the alloy with aluminium is suitable to a thickness of 2.0 - 2.4 mm. Forged billets are used as a starting material for the hot rolling. Although packet-rolling of sheet can be carried out to a thickness of 0.8 - 1.0 mm, the considerable intake of oxygen and hydrogen which occurs makes this inadvisable. Technical titanium can advantageously be cold rolled into sheets to 0.8 mm thick and narrow strip to 0.3 and less mm thick. The cold rolling of sheet from the aluminium-containing alloy is practicable to a thickness of 1.0 mm.

## Rolling and heat treatment of titanium. (Cont.) 289

Heating for rolling and heat treatment should be carried out in an oxidising atmosphere at the lowest possible temperatures and in the shortest possible time, this leading to scale-formation conditions which have the least effect on the resistance to etching and on the mechanical properties of the alloy. Technical titanium should be alloyed at 680-700 °C, the other with aluminium at 750-800 °C; four to five minutes soaking time should be provided for every mm of thickness of flat products. To destroy brittleness and improve the toughness of hot-rolled sections from the aluminium-containing alloy, they must be subjected to annealing at a temperature of 730-750 °C for 9-10 hours. A sodium hydride melt in alkali is the method recommended for scale-removal; for a very light scale, obtained at 700-760 °C, however, an alkali-sodium nitrate melt can be used.

There are 3 tables and 8 figures. There are 7 references of which 4 are Russian.